

REMARKS

The Abstract has been objected to for several informalities. A new Abstract is submitted herewith which overcomes the cited informalities.

The drawings have been objected to because of improper crosshatching. The proposed drawing changes are shown on the attached sheet of drawings and are marked in red. Formal drawings will be prepared once the drawings meet with the Examiner's approval and the application is allowed.

Claims 22-27 and 31 have been objected to for several informalities. The claims have been amended to overcome the cited informalities.

Claims 22-32 stand rejected under 35 U.S.C. 102 (b) as being anticipated by U.S. Patent No. 2,641,629 to Bennett. Independent claim 22 has been amended to include the recitation of dependent claims 23. Thus, applicant respectfully traverses this rejection.

Independent claim 22 recites a swivel for an industrial robot which comprises, among other features, "two coaxial, mutually rotatable members and having a plurality of means for transferring and/or controlling media between the members, wherein said means are flexible hoses or cables between the rotatable members, wherein the flexible hoses or cables are elastically extensible" (emphasis added). In other words there is a plurality of flexible hoses or cables between the two coaxial, mutually rotatable members and the flexible hoses or cables are elastically extensible.

Bennett relates to a control wheel for an airplane and more particularly for routing electrical leads to the control wheel. The design enables a bundle of parallel, ordinary electric cables 19 to swivel to a limited extent via spacer elements 22 and 23. However, it is respectfully submitted that Bennett does not disclose that the electric cables 19 are

elastically extensible. As a result, Bennett does not teach that the “flexible hoses or cables are elastically extensible” as is recited in amended claim 22. The Office Action simply states it is inherent to flexible wires that they should be elastically extensible but this assertion is not supported by Bennett. Indeed, Bennett specifically states that the rubber spacer 23 is flexible so as to relieve pressure on the electrical leads when the control wheel is rotated to its full extent (col. 3, lines 40-60). Thus, Bennett does not teach or suggest “flexible hoses or cables are elastically extensible” as is recited in amended claim 22. Furthermore, despite the office actions unsupported assertions to the contrary, Bennett does not disclose or suggest that the flexible hoses or cables are spiral hoses or cables as is recited in dependent claim 24.

Claims 22-24 and 26-31 stand rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 3,026,129 to Courtot in view of U.S. Patent No. 6,094,922 to Zeigler. In addition, claim 25 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Courtot and Zeigler in view of U.S. Patent No. 4,193,616 to Sarson et al. These rejections are respectfully traversed.

Independent claim 22 recites a swivel for an industrial robot which comprises, among other features, “two coaxial, mutually rotatable members and having a plurality of means for transferring and/or controlling media between the members” (emphasis added). In other words there is a plurality of flexible hoses or cables between the two coaxial, mutually rotatable members.

Courtot discloses a swivel joint with helically wound flexible hose attached to housing members. As illustrated in Figures 1 and 2, Courtot has a single hose which is wrapped around the axis of the housing and attaches to a single opening in each end of

the housing. It is respectfully submitted that Courtot does not disclose, teach or suggest a swivel which has a plurality of hoses connected between the two coaxial, mutually rotatable members as is recited in claim 22. Nor does Courtot disclose, teach or suggest that the flexible hoses or cables are elastically extensible as is recited in claim 22. Furthermore, it is respectfully submitted that Courtot does not disclose, teach or suggest a swivel which has “a plurality of through connection holes” in both the cover and the lower connection ring as is recited in claim 29. Finally, it is respectfully submitted that Courtot does not disclose, teach or suggest a swivel wherein flexible hoses or cables are connected generally axially to a central shaft of the cylindrical housing when the rotatable members are in a non-rotated position as is recited in claim 32.

In order to overcome the deficiencies cited above, the Examiner has cited Ziegler. Ziegler relates generally to semiconductor and media fabrication and more specifically to vacuum-insulated refrigerant line for allowing vacuum chamber systems with water vapor cryocool compressors to be located outside a device-fabrication cleanroom. While, Ziegler discloses two flexible tubes arranged in a corrugated pipe, the patent is completely silent about a swivel. Ziegler makes no mention of the relative rotation of the tubes nor any mention that the flexible tubes are elastically extensible. As a result, there would have been no motivation to combine Courtot and Ziegler other than the impermissible use of hindsight. Furthermore even if the patents are combined, they do not disclose all the features of independent claim 22 as set forth above.

For at least the reasons set forth above, it is respectfully submitted that claims 22-25 and 26-32 are patentable over Courtot and Ziegler. Since Sarson et al does not overcome the deficiencies of Courtot and Ziegler as described above, it is respectfully

submitted that claim 25 is patentable over the combination of Courtot, Ziegler and Sarson et al.

In view of the above, it is respectfully submitted that the application is now in condition for allowance. Prompt notice of same is earnestly solicited. If the Examiner believes that a telephone interview may expedite the prosecution of the Application, the Examiner is invited to contact the below attorney at the indicated telephone number.

Respectfully submitted,

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